



Exelon Generation®

**Dresden Nuclear Power Station**

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10 CFR 50.73

SVPLTR # 14-0033

May 27, 2014

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Dresden Nuclear Power Station, Units 2 and 3  
Renewed Facility Operating License Nos. DPR-19 and DPR-25  
NRC Docket Nos. 50-237 and 50-249

Subject: Licensee Event Report 237/2014-001-00, Secondary Containment Inoperable  
Due to Two Interlock Doors Being Open Simultaneously

Enclosed is Licensee Event Report 237/2014-001-00, "Secondary Containment Inoperable Due to Two Interlock Doors Being Open Simultaneously." This report describes an event which is being reported in accordance with 10 CFR 50.73(a)(2)(v)(C), any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to control the release of radioactive material.

There are no regulatory commitments contained in this submittal.

Should you have any questions concerning this letter, please contact Mr. Glen Morrow at (815) 416-2800.

Respectfully,

Shane M. Marik  
Site Vice President  
Dresden Nuclear Power Station

Enclosure: Licensee Event Report 237/2014-001-00

cc: Regional Administrator – NRC Region III  
NRC Senior Resident Inspector – Dresden Nuclear Power Station

LE22  
NRC

**LICENSEE EVENT REPORT (LER)**

(See Page 2 for required number of digits/characters for each block)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to [Infocollections.Resource@nrc.gov](mailto:Infocollections.Resource@nrc.gov), and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

**1. FACILITY NAME**

Dresden Nuclear Power Station, Unit 2

**2. DOCKET NUMBER**

05000237

**3. PAGE**

1 OF 3

**4. TITLE**

Secondary Containment Inoperable Due to Two Interlock Doors Being Open Simultaneously

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
03	27	2014	2014	001	00	05	27	14	Dresden Unit 3	05000249
									FACILITY NAME	DOCKET NUMBER
									N/A	05000

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)			
1	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
10. POWER LEVEL	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A

**12. LICENSEE CONTACT FOR THIS LER**

## LICENSEE CONTACT

Glen Morrow – Regulatory Assurance Manager

## TELEPHONE NUMBER (Include Area Code)

815-416-2800

**13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT**

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
B	NG	IMEC	Z021	Y					

**14. SUPPLEMENTAL REPORT EXPECTED**☐ YES (If yes, complete 15. EXPECTED SUBMISSION DATE) ☒ NO**15. EXPECTED SUBMISSION DATE**

MONTH	DAY	YEAR

**ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)**

On March 27, 2014, two secondary containment interlock doors were opened simultaneously. At approximately the same time, an Electrical Maintenance Department (EMD) First Line Supervisor (FLS) approached the interlock from the emergency diesel generator side of the 2/3-5850-137 door and two Equipment Operators (EO) approached the interlock from the Reactor Building (RB) side of the 2/3-5850-59 door. When both work groups proceeded to enter the interlock, it was realized the doors were open simultaneously and they immediately secured both doors in the closed position.

An apparent cause was not identified, however, the most probable cause was determined to be a failure of the magnetic vane operated limit switch on the 2/3-5850-59 EDG door. This determination was based off of historical poor performance of the component. As a result, the station is completing a modification to the interlock doors and replacing the existing limit switches.

Based upon the short duration of the secondary containment doors being opened simultaneously and that the Secondary Containment differential pressure remained negative during the course of this event, this event is of low safety significance. The station has adjusted the limit switch and is in the process of implementing a design modification.

An Engineering Evaluation was performed (per NEI 99-02, Regulatory Assessment Performance Indicator Guideline) to show this event did not constitute a Safety System Functional Failure.

**LICENSEE EVENT REPORT (LER)  
CONTINUATION SHEET**

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to [Infocollects.Resource@nrc.gov](mailto:Infocollects.Resource@nrc.gov), and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REV NO.	
Dresden Nuclear Power Station, Unit 2	05000237	2014	- 001	- 00	2 OF 3

**NARRATIVE****PLANT AND SYSTEM IDENTIFICATION**

Dresden Nuclear Power Station (DNPS), Units 2 and 3, are a General Electric Company Boiling Water Reactor with a licensed maximum power level of 2957 megawatts thermal. The Energy Industry Identification System codes used in the text are identified as [XX].

**A. Plant Conditions Prior to Event:**

Unit: 02	Event Date: 3-27-2014	Event Time: 0151 hours CDT
Reactor Mode: 1	Mode Name: Power Operation	Power Level: 100 percent
Unit: 03	Event Date: 3-27-2014	Event Time: 0151 hours CDT
Reactor Mode: 1	Mode Name: Power Operation	Power Level: 100 percent

**B. Description of Event:**

On March 27, 2014, two secondary containment [NG] interlock doors [IMEC] were opened simultaneously. At approximately the same time, an Electrical Maintenance Department (EMD) First Line Supervisor (FLS) approached the interlock from the emergency diesel generator side of the 2/3-5850-137 door and two Equipment Operators (EO) approached the interlock from the Reactor Building (RB) side of the 2/3-5850-59 door. When both work groups proceeded to enter the interlock, it was realized the doors were open simultaneously and they immediately secured both doors in the closed position. At this time, control room operators received alarm "902-4 E-21 U2/3 DIESEL GEN INTLK DOORS INOP/BYP" as would be expected with both doors open simultaneously; the alarm cleared when the doors were secured. The work groups communicated the failure to the Operations unit supervisors and were given instructions to exit through the RB door 2/3-5850-59 without further incident.

The event occurred during a period of elevated traffic through the interlock (i.e., while Diesel Generator work was in progress). To mitigate the potential for an additional failure following the event, the hand switches were administratively controlled and a door attendant was staged in the interlock to operate it. The attendant physically secured the opposite door when either door was opened. The doors were cycled approximately 300 times over the 24 hour period following the event; the interlock operated as expected.

An Engineering Evaluation was performed (per NEI 99-02, Regulatory Assessment Performance Indicator Guideline) to show this event did not constitute a Safety System Functional Failure.

**C. Cause of Event:**

Troubleshooting of the event was performed in accordance with station procedures, and no causal factors could be identified as a result of troubleshooting. Multiple scenarios were postulated but engineering did not identify any as an apparent cause of the event. However, the most probable cause was determined to be a failure of the magnetic vane operated limit switch on the 2/3-5850-59 EDG door. This determination was based off of historical poor performance of the component.

LICENSEE EVENT REPORT (LER)  
CONTINUATION SHEET

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Dresden Nuclear Power Station, Unit 2	05000237	YEAR	SEQUENTIAL NUMBER	REV NO.	3 OF 3
		2013	- 008	- 01	

## NARRATIVE

**D. Safety Analysis:**

The time that both doors were simultaneously opened was about five seconds, which did not result in the reactor enclosure differential pressure dropping below the required vacuum of 0.25 inches water gauge. Both the inner and outer doors were closed by normal expected means and were capable of remaining closed as designed. Based on the short duration of both doors being opened simultaneously, and that there were no material conditions preventing door closure or maintaining the doors closed, the secondary containment safety function was maintained.

From a safety consideration, the primary purpose of the secondary containment is to minimize the ground level release of airborne radioactive materials and to provide a controlled, elevated release of the building atmosphere under accident conditions. Engineering Evaluation (EC) 397055 was performed to show that events of this nature have no impact on the safety function of secondary containment, given that no exfiltration from the reactor building would have occurred as result of the airlock door breaches. Therefore, the dose consequence from postulated releases from the reactor building during these short durations would be bounded by the existing design basis LOCA dose analysis. The safety significance of this event was minimal.

**E. Corrective Actions:**

The station is completing or has completed the following actions:

1. Complete installation of an interlock modification
2. Replace the magnetic limit switch on both the EDG and Reactor Building Doors

**F. Previous Occurrences:**

IR	Date	Sort Description
1493171	3/27/2013	Unit 2/3 Interlock Failure
1530208	6/28/2013	Unit 2/3 Interlock Failure
1562654	9/23/2013	Unit 2/3 Interlock Failure

**G. Component Failure Data:**

Manufacturer	Model	Type
ZERO INTERNATIONAL	361A	Air Lock Doors